12. Troubleshooting

12-1 Items to be checked first

1. The input voltage should be rating voltage ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2. Is the link cable linking the indoor unit and the outdoor unit linked properly?
   The indoor unit and the outdoor unit shall be linked by 4 wires.
   2 wires are for power and other 2 wires are for communication, total 4 wires on each indoor unit. Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables and if connecting position on the terminal is correct. Otherwise the air conditioner may not operate properly.

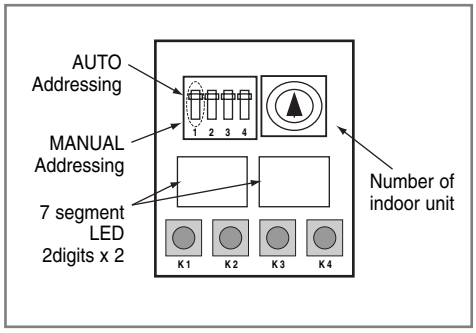
3. When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.

No	Operation of air conditioner	Explanation
1	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew
2	Fan speed setting is not allowed in AUTO(Auto) or DRY( ) mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is 5 steps and is selected automatically in AUTO mode.
3	Compressor stops operation intermittently in DRY( ) mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
4	Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 12 minutes (maximum) until the deice is completed.
5	Timer LED( ) only of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor and indoor fan stop intermittently in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
7	Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation.
8	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.

12-2 Checking and Testing operations

To complete the installation, perform the following checks and tests to ensure that the air conditioner is operating correctly.

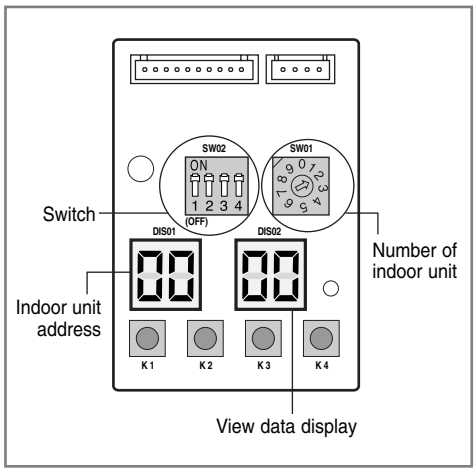
1. Review all the following elements in the installation:
   - Installation site strength
   - Piping connection tightness not to leak any gas
   - Connection wiring
   - Heat-resistant insulation of the piping
   - Drainage
   - Earthing wire connection
   - Setting number of the indoor unit installed (Outdoor unit SW)
   - Addressing mode (AUTO or MANUAL)
   - Address number on each indoor unit (Manual addressing mode)
   - Correct operation for checking connection (follow the step below)



■ **Key Options of PCB Display**

- K1 : Test button - K2 : Function button
- K3 : Reset button - K4 : View mode change button

Key / Push	K1	K2	K3	K4
1	Heat mode Try-run (Display: H1)	Refrigerant Charging (Display: H2)	Reset	View mode change
2	-	Cool mode Try-run (Display: H3)		
3	-	Pump down (Display: H4)		
4	-	Checking of pipe connection (Display: H5)		

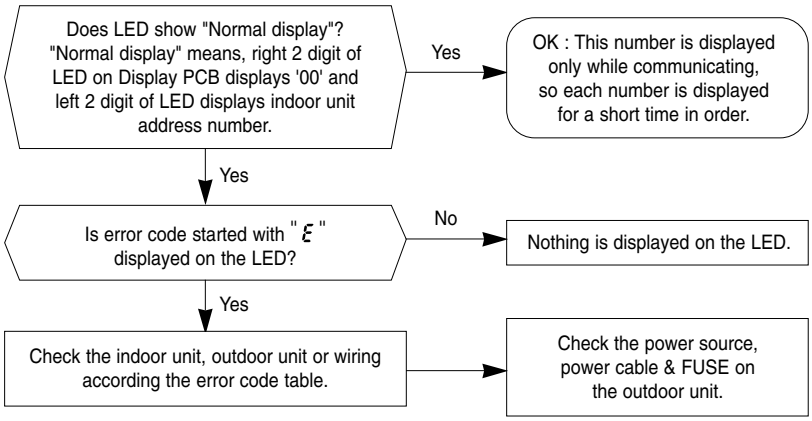


Outdoor PCB Display

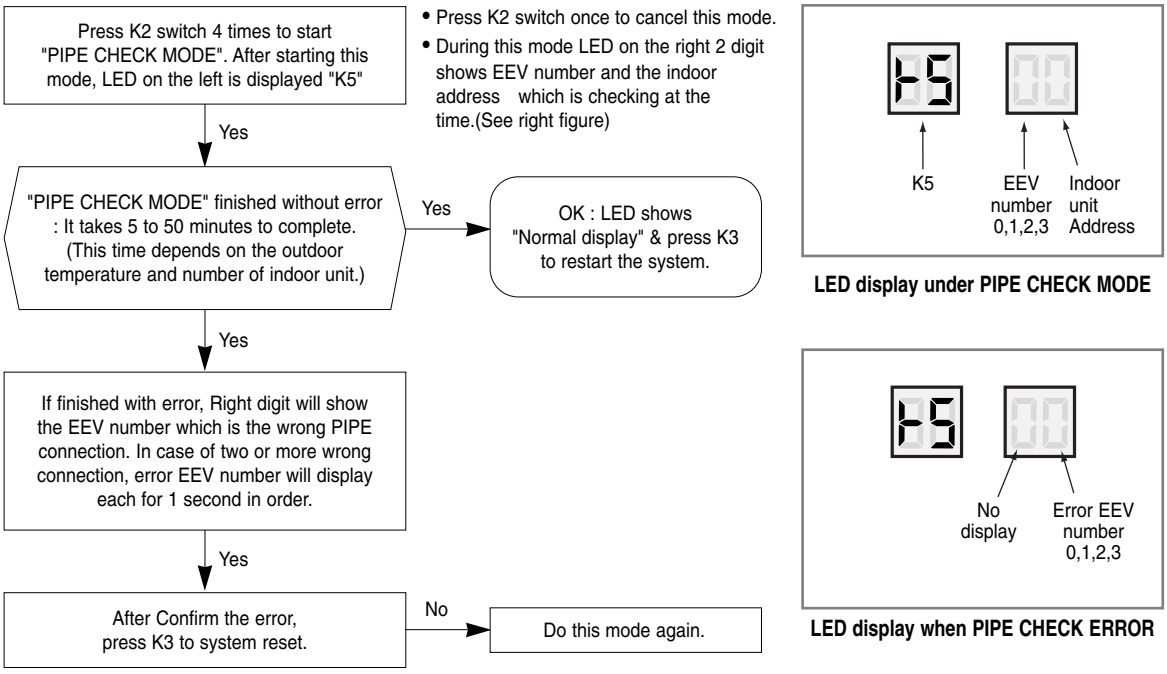
■ **K4 View mode Display changes**

Push	Display Explanation		Push	Display Explanation
0	Present Compressor Frequency		7	Fan RPM (H: high, L: low, Blank: off)
1	Target Compressor Frequency		8	Discharge temperature
2	Order Compressor Frequency		9	OLP temperature
3	EEV0 current step		10	Condenser temperature
4	EEV1 current step		11	Outdoor temperature
5	EEV2 current step	MH040FXEA2/MH052FXEA2/MH14**2X/ MH16**2X/MH18**2X/MH19**2X Always Zero	12	Primary current
			13	Target Discharge temperature
6	EEV3 current step		14	Total capacity of the indoor units
			15	Safety control code

2. Apply the power to the outdoor unit.
   Outdoor unit will try to communicate the specified number of indoor units by SW01 on outdoor display PCB.


Does LED show "Normal display"?
"Normal display" means, right 2 digit of LED on Display PCB displays '00' and left 2 digit of LED displays indoor unit address number.
Yes
OK : This number is displayed only while communicating, so each number is displayed for a short time in order.
Yes
Is error code started with " E " displayed on the LED?
No
Nothing is displayed on the LED.
Yes
Check the indoor unit, outdoor unit or wiring according the error code table.
Check the power source, power cable & FUSE on the outdoor unit.

■ **In case of AUTO ADDRESSING mode (SW2-1:ON)**


Press K2 switch 4 times to start "PIPE CHECK MODE". After starting this mode, LED on the left is displayed "K5"
• Press K2 switch once to cancel this mode.
• During this mode LED on the right 2 digit shows EEV number and the indoor address which is checking at the time.(See right figure)
Yes
"PIPE CHECK MODE" finished without error : It takes 5 to 50 minutes to complete. (This time depends on the outdoor temperature and number of indoor unit.)
Yes
OK : LED shows "Normal display" & press K3 to restart the system.
Yes
If finished with error, Right digit will show the EEV number which is the wrong PIPE connection. In case of two or more wrong connection, error EEV number will display each for 1 second in order.
Yes
After Confirm the error, press K3 to system reset.
No
Do this mode again.
K5
EEV number 0,1,2,3
Indoor unit Address
No display
Error EEV number 0,1,2,3

LED display under PIPE CHECK MODE

LED display when PIPE CHECK ERROR

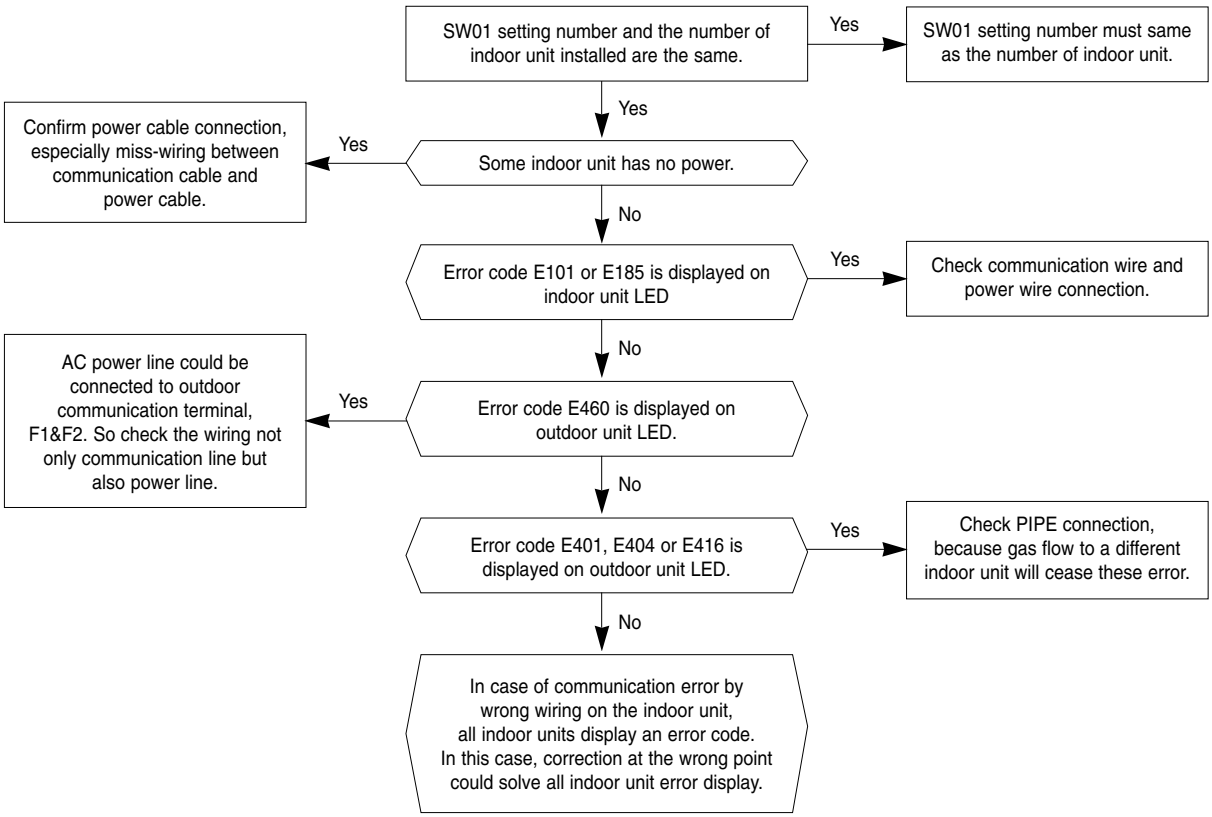
- This mode is for finding the combination between indoor unit and each valve on the outdoor unit. Because refrigerant flow is controlled with EEV in the outdoor, controller should know which EEV will control which indoor unit.
- Once "PIPE CHECK MODE" is done normally, each indoor unit will remember the given address number by the outdoor unit and no need to do this checking. But in case of listed below, PIPE CHECK MODE should be done again.
  - Re-install the system (ie.house moving)
  - Remove indoor unit, Add new indoor unit, Change indoor PCB for repair.
  - Mode change from "manual addressing" to "auto addressing"
- On this mode the controller will ignore the manual address number set on the rotary switch on the indoor PCB.
- To confirm the indoor address number assigned by this mode, use "TEST MODE" and the address number will be displayed on the LED display on the indoor unit.

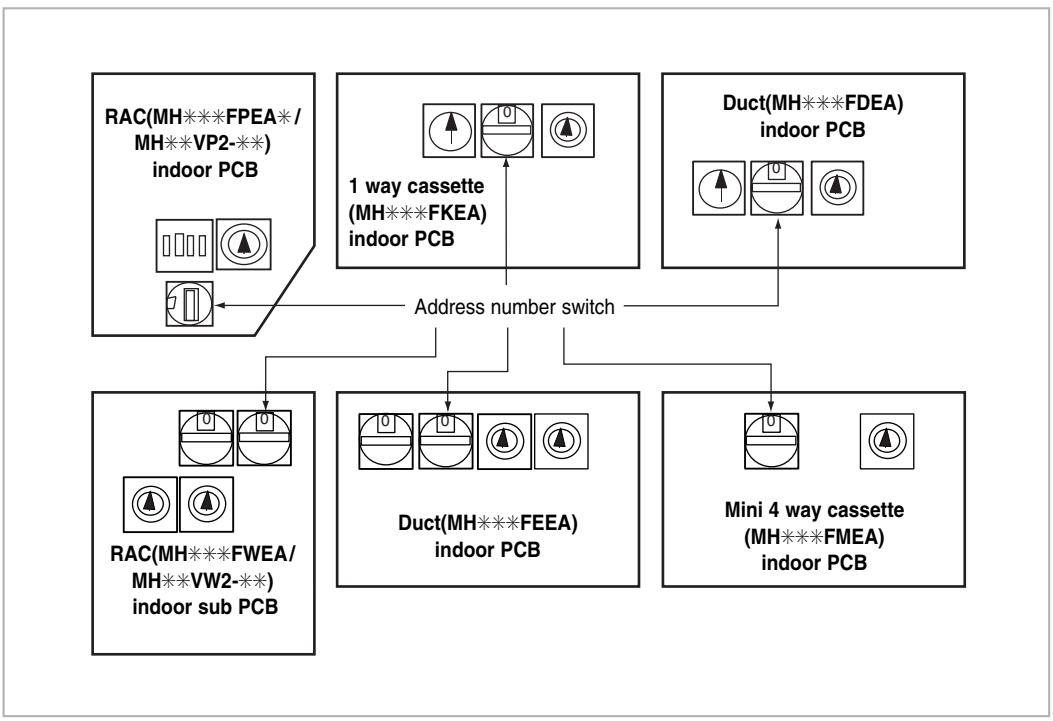
■ **In case of MANUAL ADDRESSING mode. (SW02-1:OFF)**

Checking the address number correctly on each indoor unit PCB.

- "PIPE CHECK MODE" is also able to use.

● **If Error code is displayed on indoor or outdoor LED, check as follows;**

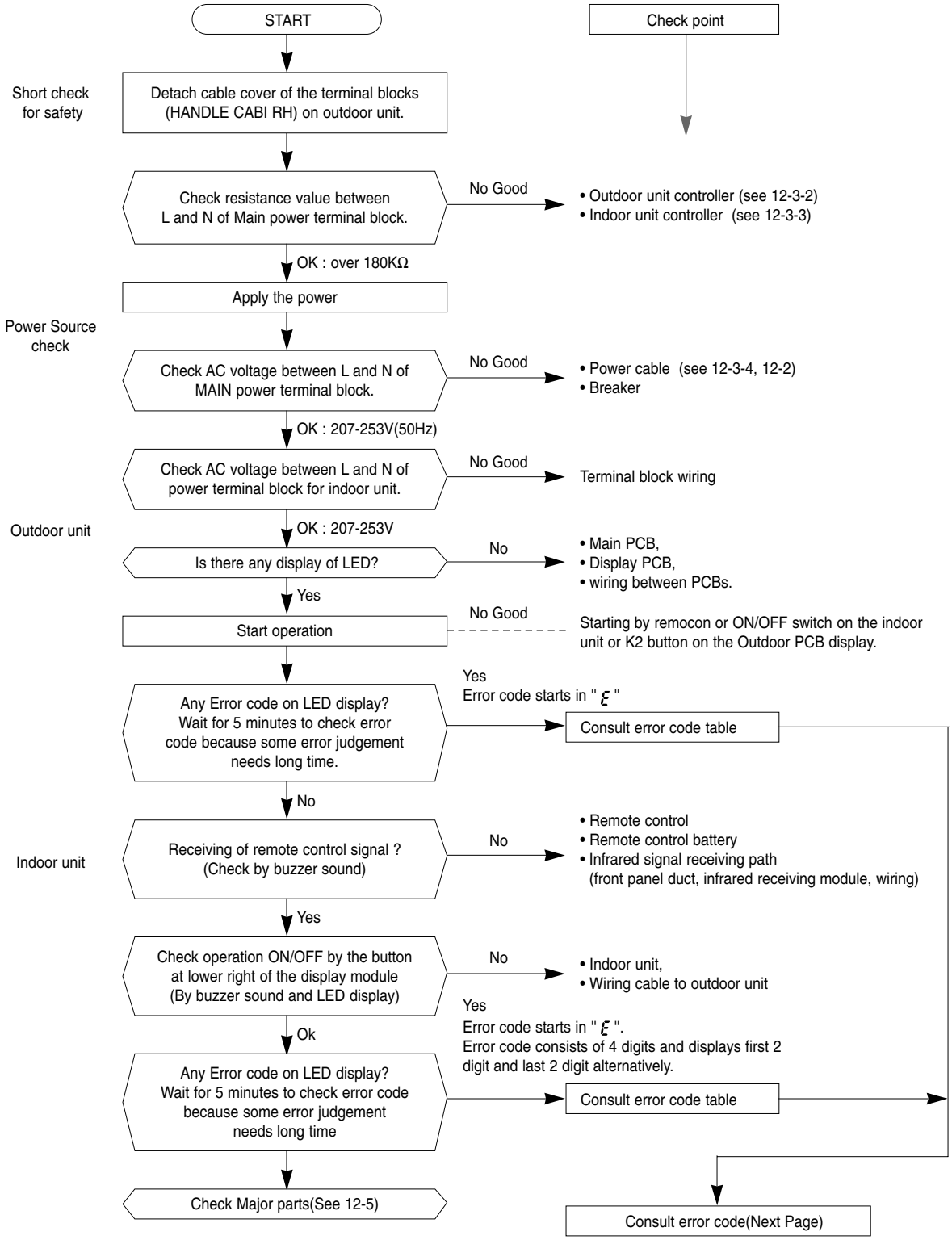

SW01 setting number and the number of indoor unit installed are the same.
Yes
SW01 setting number must same as the number of indoor unit.
Yes
Confirm power cable connection, especially miss-wiring between communication cable and power cable.
Yes
Some indoor unit has no power.
No
Error code E101 or E185 is displayed on indoor unit LED
Yes
Check communication wire and power wire connection.
No
AC power line could be connected to outdoor communication terminal, F1&F2. So check the wiring not only communication line but also power line.
Yes
Error code E460 is displayed on outdoor unit LED.
No
Error code E401, E404 or E416 is displayed on outdoor unit LED.
Yes
Check PIPE connection, because gas flow to a different indoor unit will cease these error.
No
In case of communication error by wrong wiring on the indoor unit, all indoor units display an error code. In this case, correction at the wrong point could solve all indoor unit error display.


RAC(MH✳✳✳FPEA✳/ MH✳✳VP2-✳✳) indoor PCB
1 way cassette (MH✳✳✳FKEA) indoor PCB
Duct(MH✳✳✳FDEA) indoor PCB
Address number switch
RAC(MH✳✳✳FWEA/ MH✳✳VW2-✳✳) indoor sub PCB
Duct(MH✳✳✳FEEA) indoor PCB
Mini 4 way cassette (MH✳✳✳FMEA) indoor PCB

12-3 Fault Diagnosis by Symptom

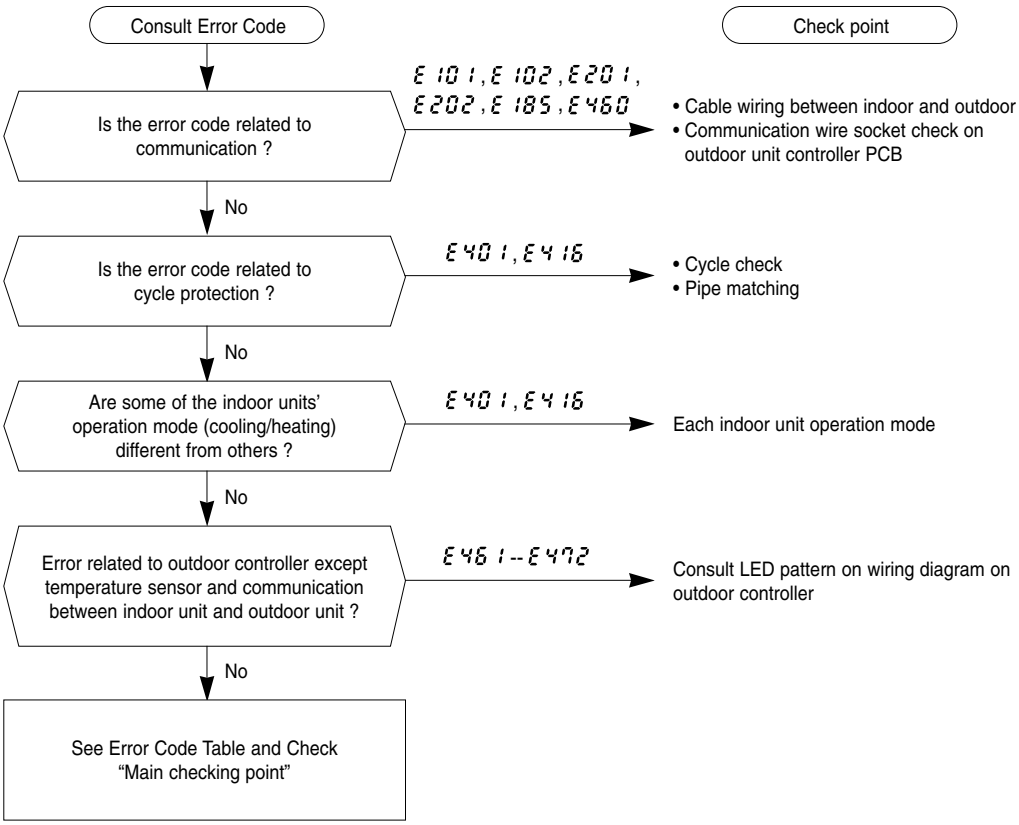
12-3-1 Basic Check Flow

Preparation : multimeter (AC voltage, DC voltage, Resistance)


START
Check point
Short check for safety
Detach cable cover of the terminal blocks (HANDLE CABI RH) on outdoor unit.
Check resistance value between L and N of Main power terminal block.
No Good
• Outdoor unit controller (see 12-3-2)
• Indoor unit controller (see 12-3-3)
OK : over 180KΩ
Apply the power
Power Source check
Check AC voltage between L and N of MAIN power terminal block.
No Good
• Power cable (see 12-3-4, 12-2)
• Breaker
OK : 207-253V(50Hz)
Check AC voltage between L and N of power terminal block for indoor unit.
No Good
Terminal block wiring
Outdoor unit
OK : 207-253V
Is there any display of LED?
No
• Main PCB,
• Display PCB,
• wiring between PCBs.
Yes
Start operation
No Good
Starting by remocon or ON/OFF switch on the indoor unit or K2 button on the Outdoor PCB display.
Yes
Error code starts in " ξ "
Any Error code on LED display? Wait for 5 minutes to check error code because some error judgement needs long time.
Consult error code table
No
Indoor unit
Receiving of remote control signal ? (Check by buzzer sound)
No
• Remote control
• Remote control battery
• Infrared signal receiving path
(front panel duct, infrared receiving module, wiring)
Yes
Check operation ON/OFF by the button at lower right of the display module (By buzzer sound and LED display)
No
• Indoor unit,
• Wiring cable to outdoor unit
Yes
Error code starts in " ξ ".
Error code consists of 4 digits and displays first 2 digit and last 2 digit alternatively.
Ok
Any Error code on LED display? Wait for 5 minutes to check error code because some error judgement needs long time
Consult error code table
Check Major parts(See 12-5)
Consult error code(Next Page)

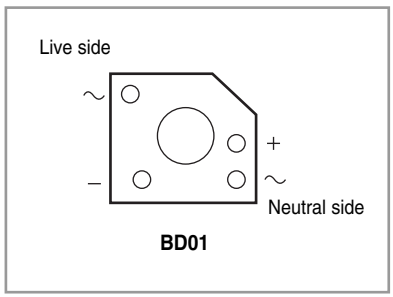
Basic Check Flow(cont.)

Preparation : multimeter (AC voltage, DC voltage, Resistance)


Consult Error Code
Check point
Is the error code related to communication ?
E101, E102, E201, E202, E185, E460
• Cable wiring between indoor and outdoor
• Communication wire socket check on outdoor unit controller PCB
No
Is the error code related to cycle protection ?
E401, E416
• Cycle check
• Pipe matching
No
Are some of the indoor units' operation mode (cooling/heating) different from others ?
E401, E416
Each indoor unit operation mode
No
Error related to outdoor controller except temperature sensor and communication between indoor unit and outdoor unit ?
E461--E472
Consult LED pattern on wiring diagram on outdoor controller
No
See Error Code Table and Check "Main checking point"

12-3-2 Checking Outdoor Controller

1. Making sure the wire connections.



2. Checking AC line
   1) Checking FUSE
   2) Checking resistance between 'L wire (BRN)' and 'DB01 Live side' normal value : 190 - 210Ω
      If value is ∞ then check R001.
   3) Checking resistance between 'N wire (SKYBLU)' and 'DB01 Neutral side' normal value : 0 - 0.1Ω

3. Checking ON/OFF pattern of LED1(Red), LED2(Green), LED3(Yellow)
   Apply the power then ALL LEDs are on for about 1 second. then changed to as follow.
   ■ **LED1 (Red)** : ALWAYS ON
   ■ **LED2 (Green)** : Blinking 4 times a second
   (This means communication between 2 micoms IC01 and IC50 is normal)
   ■ **LED3 (Yellow)** : OFF

● **In case of another pattern inverter micom detects some hardware trouble or abnormal condition.**

Yellow	Green	Red	Description	Note
Status indication				
OFF	OFF	OFF	Power OFF / No power (SMPS error)	
ON	ON	ON	Power on reset (1~2 seconds)	If always in this pattern IC01(inverter micom) has some trouble.
OFF	Blink	ON	Normal operation	
Hardware trouble				
OFF	OFF	ON	Communication Error between Main micom and inverter micom	
Blink	Blink	ON	Current sensor error	
ON	Blink	Blink	DC-LINK sensor error	
ON	ON	Blink	AC-Line zero crossing error DC LINK capacitor discharged.(Max 20sec.)	After power off this error will display until
ON	OFF	Blink	Option error (EEPROM error)	
Abnormal condition				
OFF	OFF	Blink	Comp. peak current (Over Current)	
OFF	Blink	OFF	Comp. starting error	
ON	OFF	ON	Comp. rotation error	
OFF	ON	Blink	DC-Link voltage error	
Blink	ON	OFF	Unit Over current protection	

4. Checking Display PCB LED if Error code is displayed.
   See error code table if displayed.

5. Checking DC voltage on each point

Item	Measuring point	Normal value
DC LINK	Q803 E(-)~D101 Cathode (+)	about 1.4 times as much as Power AC Voltage ex) AC220V → 305~310Vdc
inverter 15V	C803 voltage	14.5V~15.5V
Main control 12V	CN59 pin 1~pin 3	12V~15V
Main control 5V	CN59 pin 1~pin 2	4.75V~5.25V

6. Checking PFC
   When Input current is over 3.0A PFC circuit will work to control the harmonics of AC current.
   Checking is measuring DC-LINK voltage.
   PFC ON (Compressor is working) : DC LINK voltage is over 300Vdc (AC line >220V)
   After starting compressor DC Link voltage is going down because of compressor load.
   But in case of 3.0A above , DC link voltage will go up over 300V. This voltage is in proportion to AC input voltage.
   Current can be monitored with "VIEW MODE".
   Press K4 key on the outdoor display PCB for several times to change the display to sensor temperature value.
   Left 1 digit of the LED is data index and Right 3 digits are the value

Index	Value	Remark
C	Estimated Primary current value from Compressor current	The unit is 0.1A

12-3-3 Checking Indoor controller

1. MH✳✳✳FPEA✳/MH✳✳VP2-✳✳

   1) Checking FUSE

   This control PCB has 2 fuses, F701 and F702.

   If F702 is blown PCB circuit has some damage and replace PCB.

   2) Checking DC voltage

   Measure voltage between CN32 pin 1 (+12V) and CN32 pin 2 (GND).

   Normal voltage is between 11.5V and 12.5V.

12-3-4 Checking Power cable and Communication cable

See 12-2 "Checking and Testing operations" and installation manual.

12-3-5 Checking Temperature sensor

See 12-5 "Fault Diagnosis of Major Parts".

In case of a sensor in outdoor unit, temperature can be monitored with "VIEW MODE".

Press K4 key on the outdoor display PCB for several time to change the display to sensor temperature value.

Left 1 digit of the LED is data index and Right 2 digits are the value.

Index	Value	Remark
8	Discharge sensor temperature	The unit is degree C
9	OLP sensor temperature	
A	Condenser sensor temperature	
B	Outdoor sensor temperature	

12-3-6 Checking EEV

See 12-5 "Fault Diagnosis of Major Parts".
Current EEV step value can monitored with "VIEW MODE"
Press K4 key on the outdoor display PCB for several time to change the display to current EEV value.
Left 1 digit of the LED is data index and Right 3 digits is the value.

<table>
<tr><th>Index</th><th colspan="2">Value</th><th>Remark</th></tr>
<tr><td>3</td><td colspan="2">EEV-A step</td><td rowspan="5">The step value range is between Zero and 480.</td></tr>
<tr><td>4</td><td colspan="2">EEV-B step</td></tr>
<tr><td>5</td><td>EEV-C step</td><td rowspan="2">MH040FXEA2/MH052FXEA2/MH14✳✳2X/MH16✳✳2X/ MH18✳✳2X/MH19✳✳2X Always Zero</td></tr>
<tr><td>6</td><td>EEV-D step</td></tr>
</table>

12-3-7 Pipe matching

See 12-2 "Checking and Testing operations".

12-3-8 Checking Motor in indoor unit

See 12-5 "Fault Diagnosis of Major Parts".

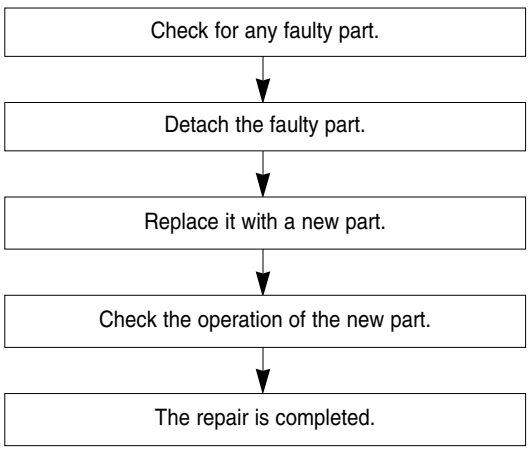
12-4 PCB Inspection

12-4-1 Cautions for Part Replacement

1. The human body carries much static electricity. Before touching a part for repair, replacement or the similar purpose, be sure to touch a grounded metallic portion by hand to let the static electricity go through the metallic portion to the earth. Especially when handling any micro computer or IC, carefully remove such static electricity before touching them.
2. When repairing any part on a work bench, be sure to place an insulative sheet on the bench and always keep the sheet surface neat without any metal fragments. If any such fragment touches a part, a secondary trouble will possibly be caused in the part.
3. Before replacing any parts, be sure to turn off the power supply. If such replacement is done with the power supply kept on, an electric shock, short circuit or destruction of a part may result.
4. During replacement or repair of a part, carefully handle it : The printed circuit board has fine lead wires (jumper wires) and glass-made parts (diode) on its substrate. So if a circuit board is roughly handled, such lead wires and parts will be easily broken or damaged by bending or shock.
5. When soldering the lead wires of any new part, be sure to polish them using an emery paper or the like before soldering them. Since the lead wires of any new part are covered with an oxide film, solder cannot adhere to the lead wires if not polished.
6. When soldering any part, care should be exercised not to apply any high-wattage soldering iron to the part for a long time. Some parts are of so low a heat resistance that they may be broken or have the properties changed if a soldering iron is so applied (Otherwise, the pattern may possibly be separated and raised).
7. The heat of the soldering iron should be transferred to the entire object to be soldered. If the solder pieces are not well fused due to insufficient transfer of the heat from the soldering iron, no satisfactory electrical continuity can be assured even if the soldered objects appear well connected to each other.
8. The solder used should be limited to a minimum. If excessive solder is used, it will cause inter-pattern contact, which may cause malfunction of the circuit.
9. Although some part of the PCB surface are coated with coating material for protection from dust and dirt, soldering is also available to the coating part. Because this coating is thin and is weak for soldering heat. But coating material remaining on the solder part should be cleaned up before soldering a new component to prevent the solder part from becoming bad conduction.

12-4-2 Procedure

The parts should be replaced in the following procedure.


Check for any faulty part.
Detach the faulty part.
Replace it with a new part.
Check the operation of the new part.
The repair is completed.

12-5 Fault Diagnosis of Major Parts

Preparation : multimeter (AC voltage, DC voltage, Resistance)

<table>
<tr><th>Part</th><th colspan="2">Diagnosis</th></tr>
<tr><td rowspan="2">Indoor
Temperature sensor
Heat exchanger in/out sensor
Outdoor
Temperature sensor
Condenser temperature sensor</td><td colspan="2">Measure the resistance between terminals of the sensor connector housing. In case of outdoor unit sensor, "view mode" is used for checking sensor temperature. In case of Indoor temperature sensor, temperature is displayed on the display unit in "Fan Mode" operation.</td></tr>
<tr><td>Normal</td><td>
<table>
<tr><td>Ambient temperature</td><td>15˚C</td><td>20˚C</td><td>25˚C</td><td>30˚C</td><td>25˚C</td><td>40˚C</td></tr>
<tr><td>Resistance of sensor[KΩ]</td><td>14.7</td><td>12.1</td><td>10</td><td>8.3</td><td>6.9</td><td>5.8</td></tr>
</table>
</td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
<tr><td rowspan="2">Outdoor
Discharge temperature sensor
OLP temperature sensor</td><td colspan="2">Measure the resistance between terminals of the sensor connector housing.
In case of outdoor unit sensor, "view mode" is used for checking sensor temperature.</td></tr>
<tr><td>Normal</td><td>
<table>
<tr><td>Ambient temperature</td><td>0˚C</td><td>10˚C</td><td>20˚C</td><td>30˚C</td><td>40˚C</td><td>50˚C</td></tr>
<tr><td>Resistance of sensor[KΩ]</td><td>553</td><td>362</td><td>242</td><td>166</td><td>165</td><td>82</td></tr>
</table>
</td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
<tr><td rowspan="2">Indoor Fan Motor</td><td colspan="2">Measure the resistance between terminals of the Motor connector housing</td></tr>
<tr><td>Normal</td><td>At the normal temperature (10˚C - 30˚C)
<table>
<tr><td rowspan="2">Terminals(wire color)</td><td colspan="3">Resistance[Ω]</td><td rowspan="2">Remark</td></tr>
<tr><td>*MH✳✳✳✳✳✳✳</td><td>MH035FPEA
MH✳✳✳✳✳-12</td><td>MH052FPEA
MH052FPEA1</td></tr>
<tr><td>Yellow-Blue</td><td>250~280</td><td>250~280</td><td>120~150</td><td>Main</td></tr>
<tr><td>Yellow-Red</td><td>420~480</td><td>330~370</td><td>120~150</td><td>Sub</td></tr>
</table>
*MH020FPEA/MH023FPEA/MH026FPEA/MH✳✳✳✳✳-07/MH✳✳✳✳✳-09
<table>
<tr><th>Terminal(wire color)</th><th>Model</th><th>Bender</th><th>Resistance(Ω)</th><th>Remark</th></tr>
<tr><td rowspan="8">Yellow-Blue</td><td rowspan="3">MH023/026/035FWEA
MH✳✳VW2-✳✳</td><td>SHIBAURA</td><td>356~435</td><td rowspan="9">Main</td></tr>
<tr><td>SINYA</td><td>531~650</td></tr>
<tr><td>DAEYANG</td><td>312~381</td></tr>
<tr><td rowspan="2">MH052FWEA</td><td>SUNGSHIN</td><td>130~159</td></tr>
<tr><td>DAEYANG</td><td>211.5~258.5</td></tr>
<tr><td>MH026FKEA</td><td>SHIBAURA</td><td>314.7~425.7</td></tr>
<tr><td>MH035FKEA</td><td>NEW MOTECH</td><td>142.8~193.2</td></tr>
<tr><td rowspan="2">Blue-Red</td><td>MH030FMEA
MH035FMEA
MH052FMEA</td><td>NEW MOTECH</td><td>115.6~156.4</td></tr>
<tr><td>MH023FEEA
MH026FEEA
MH035FEEA</td><td>SINYA</td><td>141.4~190.9</td></tr>
<tr><td>Yellow-Red</td><td>MH052FEEA</td><td>SINYA</td><td>40.1~54.3</td></tr>
<tr><td>Yellow-Blue</td><td>MH052FDEA</td><td>OYANG</td><td>46.8~57.2</td></tr>
<tr><td rowspan="8">Red-Yellow</td><td rowspan="3">MH023/026/035FWEA
MH✳✳VW2-✳✳</td><td>SHIBAURA</td><td>324.9~397</td><td rowspan="10">Sub</td></tr>
<tr><td>SINYA</td><td>320~391</td></tr>
<tr><td>DAEYANG</td><td>252~308</td></tr>
<tr><td rowspan="2">MH052FWEA</td><td>SUNGSHIN</td><td>106.2~130</td></tr>
<tr><td>DAEYANG</td><td>164.7~201.3</td></tr>
<tr><td rowspan="2">Yellow-Red</td><td>MH026FKEA</td><td>SHIBAURA</td><td>214.4~290.2</td></tr>
<tr><td>MH035FKEA</td><td>NEW MOTECH</td><td>160.7~217.3</td></tr>
<tr><td>*White-Blue</td><td>MH030FMEA
MH035FMEA
MH052FMEA</td><td>NEW MOTECH</td><td>110.5~149.5</td></tr>
<tr><td rowspan="2">*White-Yellow</td><td>MH023FEEA
MH026FEEA
MH035FEEA</td><td>SINYA</td><td>122.4~165.6</td></tr>
<tr><td>MH052FEEA</td><td>SINYA</td><td>50.3~68.1</td></tr>
<tr><td>Yellow-Red</td><td>MH052FDEA</td><td>OYANG</td><td>81.9~100.1</td></tr>
</table>
*White wire is not short with Red wire.</td></tr>
<tr><td></td><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
</table>

Fault Diagnosis of Major Parts(cont.)

Preparation : multimeter (AC voltage, DC voltage, Resistance)

<table>
<tr><th>Part</th><th colspan="2">Diagnosis</th></tr>
<tr><td rowspan="3">Outdoor Fan Motor</td><td colspan="2">Measure the resistance between terminals of the Motor connector housing</td></tr>
<tr><td>Normal</td><td>
<table>
<tr><th>Terminals(wire color)</th><th>Resistance[Ω]</th><th>Remark</th></tr>
<tr><td>Red-Blue</td><td>95~105</td><td>Main 1</td></tr>
<tr><td>Yellow-Blue</td><td>95~105</td><td>Main 2</td></tr>
<tr><td>Blue-White(run capa line)</td><td>60~75</td><td>Sub</td></tr>
<tr><td>Red-White Blue(run capa line)</td><td>0~1</td><td>Thermal fuse</td></tr>
</table>
</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
<tr><td rowspan="3">Outdoor unit EEV
Stepping motor</td><td colspan="2">Measure the resistance between terminals of the Motor connector housing</td></tr>
<tr><td>Normal</td><td>40-50Ω Orange-Gray, Red-Gray, Yellow-Gray, Black-Gray</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
<tr><td rowspan="3">Crank case heater</td><td colspan="2">Measure the resistance between terminals</td></tr>
<tr><td>Normal</td><td>1.1-1.3KΩ</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
<tr><td rowspan="3">Indoor unit step motor
Flap, Front panel</td><td colspan="2">Measure the resistance between terminals of the Motor connector housing</td></tr>
<tr><td>Normal</td><td>
<table>
<tr><th>Motor</th><th>Resistance[Ω]</th><th>Terminals(wire color)</th></tr>
<tr><td>Flap</td><td>280~320</td><td rowspan="2">Red-Yellow, Red-Orange,
Red-Blue, Red-Pink</td></tr>
<tr><td>Front panel</td><td>110~130</td></tr>
</table>
</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω...open or short</td></tr>
</table>